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FRONT COVER

Argentine Grain Moves from Farm to Market

Argentine farmers moved large crops of grain to market during the past season and, for the first time in several years, seem about to become strong competitors of United States farmers in world grain markets. (Photograph courtesy of Arnold Hasenclever.)

BACK COVER

Share of Principal Exporting Countries In World Grain Exports

In the years since the war, Argentina has lost to the United States the important position it once held in the world grain market, a position it is now trying to regain.

Credit for photos is given as follows: p. 204 (bottom), Dr. Eric Carver; p. 205, Carlos Cuevas; pp. 208-209, Sol-Film, Stockholm.

NEWS NOTES

Foreign Agricultural Service Reorganized

The work of the Foreign Agricultural Service has been expanded substantially with the objective of maintaining, regaining, and widening the foreign markets for surplus or potentially surplus American farm products.

At the same time, FAS has completed a thorough internal reorganization in support of its expanded program. In directing the work, Clayton E. Whipple, Acting Administrator, is aided by three assistant administrators: Gustave Burmeister, Marketing Development; Fred J. Rossiter, Foreign Service and Trade Programs; and W. A. Minor, Management.

Five principal types of marketing development activity will be carried out: (1) Negotiating with foreign governments and traders in matters relating to market preferences, trade restrictions, foreign exchange, and discrimination against American farm products; (2) providing first-hand information to American agricultural exporters and importers on market situations and trade opportunities; (3) bringing together American exporters and foreign importers under conditions favorable to trade; (4) analyzing and interpreting commodity and trade information for dissemination to American agriculture; and (5) providing a comprehensive appraisal of foreign production and competition.

"For some time," Secretary Benson said, "we have felt the need for revitalizing, reorganizing, and expanding the work of the Department in the foreign marketing field. We believe that we are in position now to make a very real contribution to American agriculture by way of helping to smooth the economic and diplomatic paths over which our exports move. . . ."

FOREIGN AGRICULTURE ALICE FRAY NELSON, EDITOR

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Outlook for U. S. Farm Exports*

by JOHN H. DAVIS

Overseas outlets for farm products are extremely important in a highly developed agricultural economy such as ours. It is true that foreign markets do not take nearly as much of our farm products as do our domestic markets, but they provide those extra outlets for food and fiber that make a more complete market for everything we produce.

During the 1951-52 marketing year, our agricultural exports hit a record total of more than $4 billion. But since then, they have fallen off and, in the 1952-53 marketing year, totaled only $2.8 billion, a 30-percent drop. Many of our farm program difficulties, including surpluses and depressed prices, are the direct result of this reduction in foreign markets.

About our trade prospects, we can be somewhat optimistic. Despite the fact that our agricultural exports have settled back to a lower rate than we desire, there are good indications that we can at least maintain the present rate. Perhaps we can even raise it somewhat, by applying real effort.

This conclusion is based on the prospect of sustained high-level economic activity for our Nation as a whole. Our export outlook is of course closely tied in with our overall prosperity. Similarly the prosperity of many countries with whom we do business is closely tied in with our economic well-being. When buying our farm products, foreign customers have to do it principally with dollars earned when we buy from them. And our foreign purchases are heaviest when we are prosperous. With a continued high level of activity in our domestic economy, we can gain in our total agricultural exports in the months ahead.

That is the broad picture. Now for some of the individual commodities:

So far as wheat is concerned, there is unfortunately little reason for optimism. World supplies are very high, and 1953 has seen continued high output. A further decline in our exports seems in prospect, with our participation in the International Wheat Agreement only a partial buffer.

The outlook for rice is still good, and little change is expected in other grains, though there may be some shift from corn to grain sorghums in the feed grain total.

Export sales of cotton have fallen drastically in recent months. Production in competing areas is relatively high and prices of competing foreign growths are generally lower than ours. In the year ahead, however, it is possible that cotton exports will be somewhat higher because of the low inventory of United States growths abroad and some pickup in textile activity, particularly in Europe.

For the next year, our exports of fats and oils should hold to the high levels of recent years and may be slightly higher than during the past year, especially exports of cottonseed oil and soybean oil. In spite of a fairly good world balance between production and consumption requirements, much of the surplus available for export is in the United States and it appears that other countries must come to us if they are to maintain present consumption levels.

The prospects for our agricultural exports, then, are neither entirely gloomy nor entirely bright.

The reduction in agricultural exports during the past marketing year is but the natural culmination of a whole decade of agricultural history. That history is well known. American farmers greatly expanded production during the war and postwar years. The results were outstanding—an increase of more than 40 percent over 1939 production. Farmers not only met the needs of war; they increased our own per capita living standards as well. Then, following V-E Day and V-J Day, they fed hungry people in areas where production had been dislocated by war.

Because American agriculture expanded to meet a challenge, it finds itself with a production plant considerably larger than it probably would have had if there had been no war. What to do with the full capacity of this plant is a very real problem, for the world's agriculture has recovered from the war and production has increased with ad-

* Adapted from address before 31st Annual Agricultural Outlook Conference, Washington, D. C.

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vanced technology. Last year, production of leading commodities was at record or near-record levels. This means that foreign countries now have less demand for our food and fiber than they did only a couple of years ago. Furthermore, they have the problem of earning enough dollars to buy from us the products they do need. And, perhaps most important, they often find they can buy farm products from others more cheaply than from us.

These postwar phenomena have come upon us rather suddenly, but they have been a long time in the making. And the adjustments that our agriculture has had the good fortune to be spared now confront it squarely.

Farm production is, of course, not an easy thing to adjust. It is not elastic, like a rubber band. Instead, it is more like molasses candy; it will stretch out but does not snap back. This characteristic of agricultural production intensifies our immediate problems of adjustment; the very fact that our agricultural industry is so highly productive that it is difficult to curtail should not be thought of as a liability but should be regarded as one of our real sources of national strength.

For this immediate period we probably have no choice but to use mechanisms available to us—acreage allotments, marketing controls, and price support programs—for bringing production and markets into better balance. I believe that this can be done successfully over the next 3 to 6 years. Over the longer period, however, it will not be such mechanisms that solve our farm problems. The day is not too far ahead when our country will have outgrown its surpluses. This it will do through population growth, through improvement of diets, and through expansion of foreign markets.

Meantime, there is need for more aggressive policy on the part of private traders and of the government of our country to find more diversified markets for farm products both at home and abroad. Where world prices are below our domestic prices, ways must be found to make our products more competitive in foreign trade.

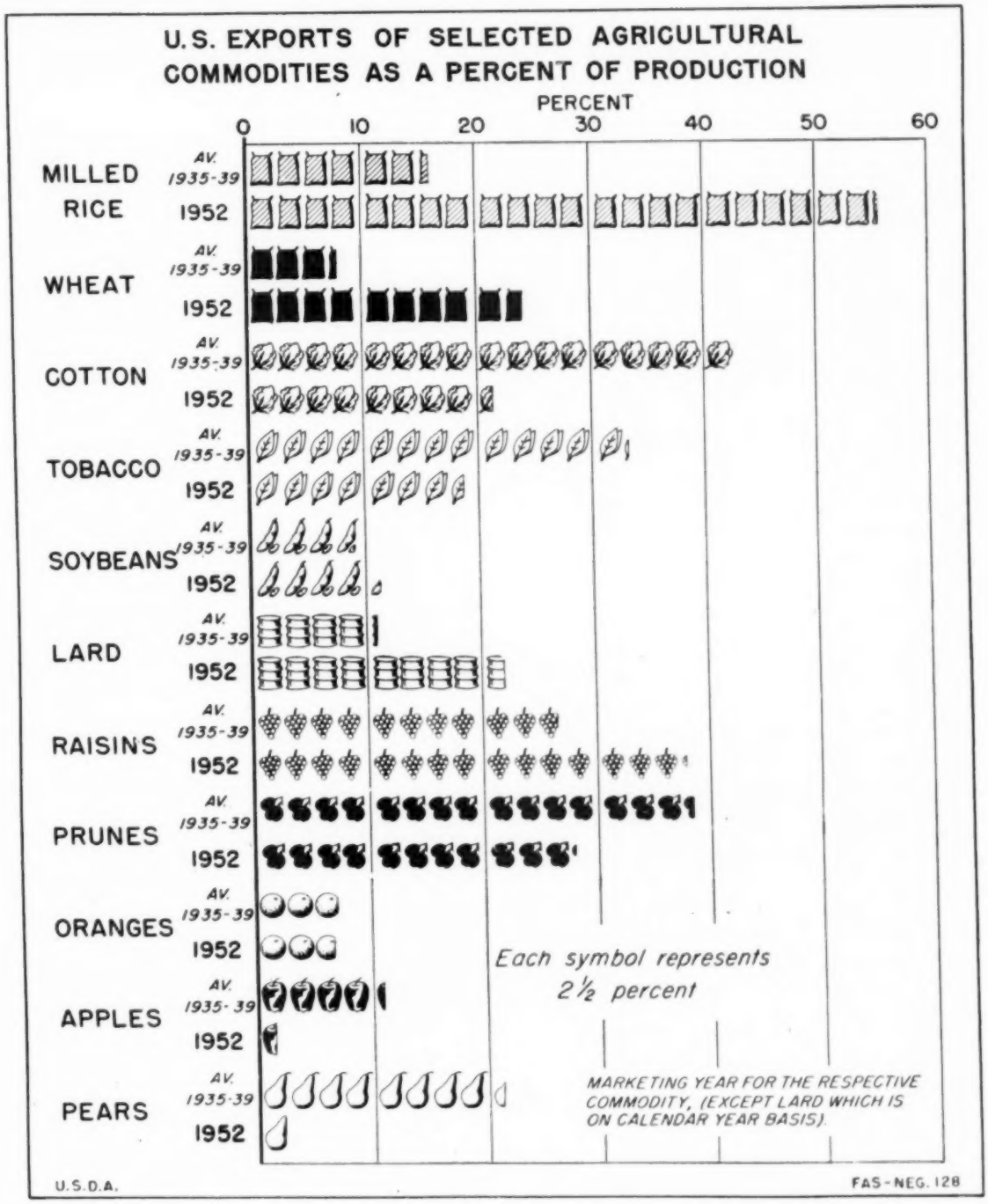
If world prices continue to sag below our domestic support price levels, we may expect increased requests from our producers for action to prevent foreign products from interfering with our domestic support program. In this connection, where interference is a fact, there is little choice but to invoke countermeasures such as action under Section 22 of the Agricultural Adjustment Act. In invoking such action, however, we have the difficult but necessary job of distinguishing between normal imports and abnormal imports attracted by our support prices.

As a responsible member of the world family of nations, our country must make every effort to get its great quantities of agricultural products into use so long as any needs of friendly nations remain unmet. The paradox of unmet needs and unused goods implies a weakness in world marketing processes that we should do our best to correct.

Broadly, we should try to improve the dollar or hard currency earnings of the rest of the world. Achieving this, and at the same time maintaining our own levels of living, is a challenge to our ingenuity—a challenge that I am sure we can meet to some degree.

A part of our marketing problem today calls for greater skill in negotiating with governments, for previous commercial marketing structures have broken down and governments have tended more and more to take over complete management of their country's trade. This field of negotiation is relatively new. Our ability to maximize the participation of private trade interests in such negotiating will be one measure of our success in combating the overall problem. We need to improve our service to the private agricultural trade. We need to improve our own knowledge and, at the same time, increase the availability to the trade of those things we already know. We need a better understanding of why other governments and other peoples act as they do and of what we and our trade partners can do about it. We need to pay special attention to holding our own in competition with the barter transactions, switch transactions, and transit purchases that are becoming common on the part of other countries.

In the interest of building a more permanent export market, we need also to go back to some first principles of marketing and send to world markets a better quality product and one whose availability is assured. Perhaps events of the past 10 years have resulted in too little attention being paid to building up permanent trade relationships. In such a situation the temptation to exact profits at the expense of a long-term market often has too great a practical weight. So far as we as a Nation are concerned, an attempt to improve this situation would apply about equally to imports and exports.


U.S. EXPORTS OF SELECTED AGRICULTURAL COMMODITIES AS A PERCENT OF PRODUCTION
PERCENT
0
10
20
30
40
50
60
MILLED RICE
WHEAT
COTTON
TOBACCO
SOYBEANS
LARD
RAISINS
PRUNES
ORANGES
APPLES
PEARS
AV. 1935-39
1952
Each symbol represents 2½ percent
MARKETING YEAR FOR THE RESPECTIVE COMMODITY, (EXCEPT LARD WHICH IS ON CALENDAR YEAR BASIS).
U.S.D.A.
FAS-NEG. 128

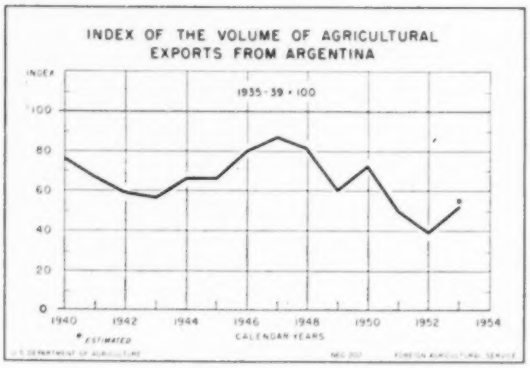
Argentina Again Competes For World Markets*

by CONSTANCE H. FARNWORTH

The Argentine farmer is slowly moving back into his place as an important competitor of the United States farmer in world markets. Two years of drought—1951 and 1952—and 7 years of discriminatory government policy—1946 through 1952—temporarily lost him this place. During the 1952-53 season, weather has been good in Argentina and the government has been encouraging agricultural production and trade; figures for the first half of 1953 indicate that Argentina's exports, valued at 1935-39 prices, will be 13 percent above last year's and 52 percent of prewar shipments. Just how fast Argentina will regain status as a principal exporter of agricultural products is difficult now to forecast, but it does have the resources to supply its growing population and yet exceed its high prewar level of exports.

Argentina is naturally a strong competitor of the United States. Both countries have similar agricultural resources and climate. For this reason, too, our agricultural exports to Argentina are relatively small, averaging only about 2 percent of the $303.5 million worth of goods, chiefly industrial products, that we shipped to Argentina during 1946-50. Argentina is, however, a fairly important source of some agricultural commodities we import to complement or supplement our own production—hides and skins, carpet wool, canned meat, and tanning extract. During 1946-50, our yearly purchases there of agricultural products averaged $135.5 million.

The leading commodities common to both Argentina and the United States and those that generally pose a surplus problem in both countries are grains and oilseeds. For flaxseed and oil, the chief area of competition is Europe; for grains, it is wider, ranging from Brazil, Chile, Paraguay, and Peru to the United Kingdom, France, Switzerland, Italy, the Netherlands, Germany, and Belgium-Luxembourg to India and Japan.



In this competition Argentina has an advantage over the United States: it is not a dollar country. But in late years Argentina has not profited fully from this situation because its agricultural output has decreased. Countries like Brazil and Chile, which usually get substantial quantities of wheat from Argentina, last year had to use about 106 million of their scarce dollars to buy more grain than usual from the United States and Canada.

Argentina's Place in the Export Market

More than 90 percent of all Argentina's foreign exchange earnings come from exports of agricultural products. Most important of these products are grains, flaxseed, wool, meat, and hides and skins; others generally entering trade are fruit, oilcakes, dairy products, quebracho extract, and edible oils. During the 1934/35-1938/39 United States marketing season, Argentina exported, on the average, about half of the grain shipped by the four principal grain exporting countries of the world. The United States was last with 12 percent. In 1951-52, the positions of Argentina and the United States were reversed.

The year 1953 already promises some increase in Argentina's share of world markets. Good weather and a government policy more favorable to agriculture have resulted in better than average

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* The author made extensive use of the reports from the U. S. Embassy in Buenos Aires.

TABLE 1.—*Argentina's principal agricultural exports, average 1935–39, annual 1946–53*

Calendar year	Wool [1]	Meat [2]	Hides [3]	Quebracho extract	Wheat	Corn	Oats	Barley	Rye	Flaxseed	Flaxseed oil	Sunflowerseed oil	Oilcake
	Million pounds	*Million pounds*	*1,000 long tons*	*1,000 long tons*	*1,000 long tons*	*1,000 long tons*	*1,000 long tons*	*1,000 long tons*	*1,000 long tons*	*1,000 bushels*	*1,000 short tons*	*1,000 short tons*	*1,000 short tons*
Average:													
1935–39	306	[4] 1,460	362	180	5,281	5,976	334	274	131	59,177	(5)	(5)	120
Annual:													
1946	452	1,481	384	204	1,421	2,165	328	645	153	1,534	163	65	279
1947	346	1,806	324	212	2,269	2,329	67	602	243		235	65	618
1948	472	1,307	386	129	2,168	2,494	89	651	148		59	54	576
1949	178	1,161	443	95	1,825	1,046	193	193	196		76	15	92
1950	366	1,000	529	204	2,743	781	383	91	168	5,160	227	114	52
1951	180	882	284	214	2,452	293	111	152	200	7,183	278	92	35
1952	100	640	348	172	67	633	43	120	111	1,025	34	11	38
1953	471	(6)	(6)	145	[7] 1,907	[8] 802	[7] 129	[7] 358	[7] 153	[7] 390	[7] 92	[7] 13	(6)

[1] Year ending September 30. [2] Carcass-meat basis. [3] Includes tanned hides. [4] 1934–38. [5] Less than 500. [6] Not available. [7] January through September. [8] January through October. [9] January through August. Compiled by Foreign Agricultural Service.

crops of wheat, small grains, and flaxseed for the crop year 1952-53, and in improved conditions for corn and livestock production.

During the years 1935-39 Argentina was the world's leading exporter, in tonnage, of the important trade items flaxseed, coarse grains, and meat, and was second in the export of wool and bread grains. At that time Argentina exported more of all of these commodities than did the United States. The United States ranked fourth as a world supplier of coarse grains, sixth for bread grains, eighth for meat, and was a net importer of flaxseed and wool.

During World War II, the volume of Argentine exports of farm products, valued at 1935-39 prices, declined sharply, and in 1943 was only 57 percent of the prewar period. Part of the dip in exports in 1943 was due to adverse weather, but the most significant factor was a shortage in shipping space. During the war years, too, Argentina could not make necessary imports of fuel oil and had to burn large quantities of grain to ward off a critical fuel shortage. Additional quantities deteriorated in storage and were also burned. By the postwar year 1947, Argentina's export picture had changed somewhat and its exports had climbed back to 87 percent of prewar, in response to pent up demand abroad for Argentine grains, oil-seeds, wool, and meat.

Export figures did not reach prewar, however, for in 1946 the government took over the marketing of agricultural products through its official agency the Argentine Trade Promotion Institute (IAPI). Farmer dissatisfaction with government handling of agricultural surpluses and increased domestic consumption led to a downward trend in agricultural exports, a trend that was felt throughout the Argentine economy. This decline in exports was accelerated by the government's efforts to industrialize the country at the expense of agriculture. Volume of exports in 1951 was down to one-half of prewar, and in 1952 was at the lowest level in 20 years—only 39 percent of prewar. The droughts of those 2 years were partly responsible for the low exports.

Grains

Although wheat is the leading grain export of Argentina, as of the United States, the government last season was forced to adopt rigid controls over both exports and domestic consumption. In 1951-52 the crop totaled only 2,067,000 long tons compared with the 1935-39 average of 6,529,000 tons, and in the calendar year 1952 exports were a mere 67,000 tons compared with an average of 3,281,000 in 1935-39. From June 1951 until December 1952, no official wheat exports were made, and measures were taken to conserve wheat supplies for domestic use.

Despite these measures, Argentina did not have enough wheat to carry through to the new crop of 1952-53, and for the first time became an importer of wheat, taking 203,000 long tons from the United States.

Wheat production for the 1952-53 crop showed an amazing recovery over the low crop of 1951-52, reaching an estimated 7,677,000 tons. The recovery was due to an increase in acreage—the result of the promise of higher prices to producers—and to excellent weather. After the harvest of the new crop in November and December, wheat began to move out of Argentina again, and for the first 10 months of 1953 trade in wheat totaled 1,907,000 long tons. Brazil, India, and Italy have been the principal purchasers so far this year. These countries also import wheat from the United States but buy more from us when, as last season, Argentina has a wheat shortage.

Corn has also long been an important crop in Argentina. For several years Argentina was the principal corn exporting country of the world but has been consistently out of the lead since 1949, when the United States took first place. In prewar years the tonnage of corn produced in Argentina exceeded that of all other crops and averaged about 7,767,000 long tons annually. Exports of corn also led other grains in those years, averaging 5,976,000 tons. Production and exports of this crop, like those of wheat, dropped to a record low in 1951, when only 293,000 long tons were exported. The crop for 1952-53 is less than half

the prewar average, but greatly exceeds the crops of the preceding 3 years. These small crops resulted from adverse weather conditions and producer dissatisfaction with the government export price. Exports from January through October 1 of 1953 were 802,000 long tons, the largest share of which went to the United Kingdom.

The small grains—oats, barley, and rye—generally make up only a small part of Argentina's total grain exports, but Argentina supplies a significant part of world trade in these items.

Oilseeds

Another Argentine commodity that competes with United States exports is flaxseed. A few years ago, Argentina lost to the United States its position as the world's leading producer of flaxseed, but it still exports more flaxseed and oil than does the United States, despite the fact that its exports have fallen to less than a tenth of prewar. Part of this drop has been the result of the increased production in the United States, for this country was once an important market for the Argentine product. Part of the drop has come from a decline in production brought on by bad weather and adverse agricultural policies. The drop in production has been sharp—from an average of 59,571,000 bushels in 1934-35 to 1938-39 to 12,338,000 in 1951-52.

Sunflower-seed oil is the principal edible oil produced and exported from Argentina, which usually supplies the bulk of the world trade in this commodity. Exports in 1951 were 92,353 short tons, sold mostly to the United Kingdom. Exports in 1953 are not expected to exceed 20,000 tons. The United States does not export sunflower-seed oil but this oil competes with edible oils that we do export.

Animal Products

The animal products of Argentina, unlike the above commodities, are imported by the United States to supplement domestic supplies. Carpet wool is one of these products. It makes up about 30 percent of Argentina's annual output of wool, which is 400 million to 500 million pounds, and generally finds a good market in the United States, for most of our production is of apparel wool. Exports of Argentine wool in the postwar years have generally followed the trend of other products, dropping to a low of only 100 million pounds for the 1951-52 season and increasing to 471 million for the 1952-53 season. Exports in 1953 are nearly 5 times those for 1952. Heavy wool sales started in July 1952, when the foreign exchange rate on wool was raised and the 8-percent export tax suspended. These heavy shipments represent liquidation of stocks that had accumulated because of a discouraging wool export policy. On October 1 the tax was reimposed but it is not known at this time what effect this will have on future sales since present prices of wool are more remunerative than in early 1952.

Canned beef is another supplementary product that the United States imports from Argentina, but the largest share of Argentina's total exports of meat goes to the United Kingdom under contract.

Until 1952, Argentina ranked as the world's leading exporter of meat, primarily of beef. In that year, exports totaled only 640 million pounds compared with 1,460 million for the years 1934-38. In addition to the major factors already mentioned as responsible for the decline in farm exports, the increase in population from a prewar average of about 12.6 million to 18.1 million in 1952 had its effects on exports, especially of meat, for per capita consumption of meat in Argentina (estimated at 230 pounds in 1952) is one of the highest in the world. Mainly because of continuing high domestic demand for meat, production over the whole period held up well, ranging between 4 billion and 5 billion pounds.

TABLE 2.—*Argentine-United States trade in flaxseed and oil in terms of oil average 1935–39, annual 1946–52*

Year	Argentina[1]	United States	
	Exports	Exports	Imports
	Short tons	*Short tons*	*Short tons*
Average:			
1935–39	563,725	640	116,190
Annual:			
1946	178,050	1,003	79,513
1947	235,296	5,082	61,348
1948	58,508	30,988	12,426
1949	76,390	32,711	1,615
1950	275,788	47,334	34
1951	346,577	45,529	18
1952	43,799	27,897	4

[1] Imports insignificant, if any.
Source: Compiled by Foreign Agricultural Service.

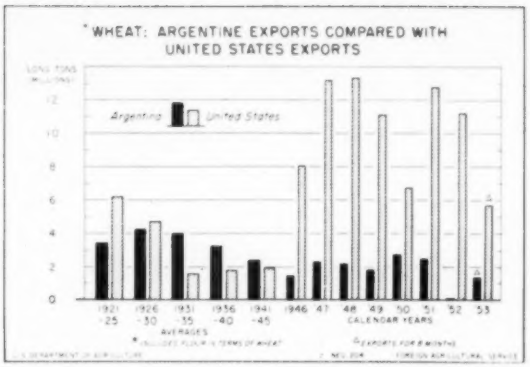
The year 1953 started out with a shortage in market receipts of cattle in Argentina, and beef exports have virtually been stopped to conserve supplies for the domestic market. Cattlemen are reportedly holding back cows and heifers to increase the size of their herds, which may lead to large beef supplies in 2 or 3 years.

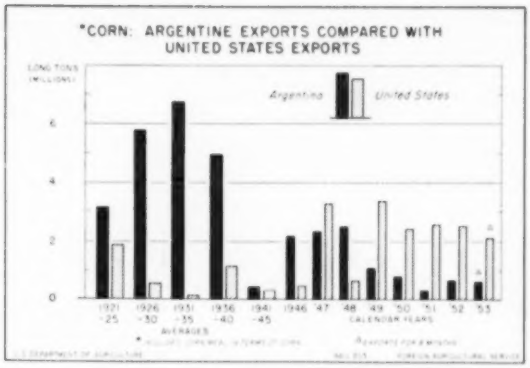
For the more than 300 million pounds of hides, mostly raw, that Argentina exports annually, the United States and the United Kingdom are generally the principal markets.

The cheeses we have long bought from Argentina are mostly of the Italian type, not produced here.

Other Export Products

Argentina produces and exports most of the world's quebracho extract, used for tanning hides. The largest share of the exports, which average about 200,000 long tons annually, generally is taken by the United States to help supplement domestic supplies of other tanning materials. Currently, however, competing tanning materials are available in world markets at prices lower than





those set by IAPI for quebracho extract, and the export prospects for the extract do not look bright.

Argentina also exports fruit, some of which competes with our exports. For example, apples and pears, the principal fruits exported from Argentina, go mostly to Brazil and Europe, important outlets for our fruit, too. Currently Brazil is by agreement taking most of its apples from Argentina and excluding the United States from its former market there, although the Argentine fruit season does not coincide with our own peak season. Europe is also increasing its imports of Argentine apples.

Exports of apples from Argentina in 1951 reached a high of 3,596,000 bushels, and an estimated 1,608,000 bushels is available for export in 1953. Pear exports also were high in 1951—1,490,000 bushels—and estimates place the surplus for 1953 at 617,000 bushels. Pear sales are showing a marked increase over prewar. We generally take some Argentine pears but most of them are going to Brazil.

Policy Measures Promoting Agricultural Trade

The critical exchange situation that has developed in Argentina during the past few years has been responsible for a sharp change in the policies that had favored consumers over producers. The government is making an effort to attack the exchange problem by initiating policies more favorable to agricultural producers, from whose products come most of the country's foreign exchange. It is doing so through its new Five-Year Plan, price increases, exchange manipulations, and barter and trade transactions. During the past year the major help given the farmer has been in the form of more abundant credit for crops, livestock, and machinery.

Second Five-Year Plan

Argentina's Five-Year Plan of 1946, which was designed to bolster industry at the expense of agriculture, was financed from funds that the government accumulated by purchasing export crops at low fixed prices from producers and selling them abroad at a profit. As a result, farmers were not interested in increasing their crop output and the country lost a large share of its needed foreign exchange.

During 1952 the Argentine Government began to reveal its concern over the status of agricultural output when it designed a new Five-Year Plan, effective in January of 1953. The New Plan envisages higher agricultural production through increased livestock numbers and cultivated area during the period 1953-57—an acreage increase of 24.7 million and a 9-million-head increase in livestock. Goals set for the principal export commodities are 19.7 million acres for wheat, 17.3 for corn, 4.7 for oats, 3.5 for barley, 6.9 for rye, and 4.9 for flaxseed and for sunflower seed. These goals represent more than a 50 percent increase in the combined area used for these crops in 1952-53. Beef cattle numbers are to be increased by 10 percent above the July 1951 estimate of about 38 million head, sheep by 5 percent over the July 1947-51 average of about 50 million head, and hogs 60 percent above the average of 2.5 million for the same period. Dairy cattle numbers are also to be increased by about a million head, to 4 million.

In the light of Argentine economic needs and possibilities, these goals appear reasonable if they are accompanied by a favorable ratio between prices paid to producers and prices they must pay for supplies, equipment, and labor and if crop yields and efficiency in production of pasture and forage products are improved. Some public services are provided for in the Plan to aid livestock research, marketing facilities, and irrigation. Although the fund set aside for agriculture and forestry is not large compared to the importance of agriculture in the country's economy, other incentives such as favorable price and trade policies can be effective aids to expansion. So far, however, not enough attention has been paid to actually attaining the goals. State trading is still endorsed under the new Plan although greater participation of producer cooperatives is being urged.

Prices

To increase 1952-53 output the Argentine Government guaranteed sharply increased prices to producers well in advance of planting time. Producers responded by increasing acreage. Price increases for grains and flaxseed were set as follows (converted at the basic exchange rate of 5.00 pesos to the dollar):

	1951–52	*1952–53*	*1953–54*
	(Dollars per bushel)		
Wheat	1.85	2.72	2.72
Corn	[1] 1.52	2.29	...
Oats	.74	1.10	1.02
Barley	1.28	1.87	1.83
Rye	1.42	2.13	2.18
Flaxseed	2.54	3.30	3.30

[1] The price of corn for 1951–52 was raised to $2.03 per bushel during the harvest.

In March of 1953 the Argentine Government assured farmers that prices for flax and wheat and other small grains in 1953-54 would equal those of the crop just harvested. As a result of this assurance and of good weather at planting time, a further slight increase in planted area is expected. Next year, however, the government will probably have difficulty in meeting these prices because world prices for commodities such as grains and fats and oils are lower. In addition, Argentina's beef supplies for export are running behind commitments because of a decline in the number of cattle marketed and a demand by domestic consumers for ample supplies of low-priced beef. The live-weight price for export steers is about 16 to 20 cents per pound (converted at the basic rate of 5.00 pesos to the dollar) and the minimum official export price for canned corned beef is $14 for a case of forty-eight 12-ounce cans. Very little corned beef is being sold at this price, however, because of lower prices for beef in the United States.

Exchange Rates

A system of multiple exchange rates is used in Argentina to control exports and imports of various commodities. These rates were adjusted within the existing structure in late 1952 and in 1953 to provide additional peso income to domestic producers on foreign sales and to promote the sale of agricultural products abroad by lowering the price of Argentine export products. To accomplish this the Central Bank has made several changes in the peso exchange rates at which it buys foreign exchange arising from the export of these commodities.

Argentina has a basic export rate of 5.00 pesos to the dollar and preferential rates of 7.50 and 13.97 (official legal free rate) pesos for certain commodities. The basic export rate has generally been applied to major agricultural commodities. But in 1952 and 1953, to increase trade and production, higher rate classifications have been given to some of these commodities that are not handled by IAPI, or mixed rates have been applied to them. These exchange rate increases have been effective in raising the peso proceeds from exports to cover higher domestic costs. For example, an exporter of wool now gets 25 percent more pesos for the exchange arising from his sales abroad than before the rate was increased. The modification in the exchange rates applied to wool (from the use of the basic rate exclusively to a mixed rate of 50 percent at the basic rate and 50 percent at 7.50) has had the most important results so far with regard to stimulating exports.

The basic rate of 5.00 pesos to the dollar continues to be applicable to potential export prices of grain and oilseed products, which are marketed by IAPI. However, the increase in guaranteed prices to growers of these crops in 1952-53 and the downward trend in world commodity prices are serving to cut down the high profits from export marketing. The guaranteed prices to producers in most cases are higher than the peso equivalent abroad.

Trade and Barter Agreements

Argentina is not a member of the General Agreement on Tariffs and Trade. It has instead practiced the setting up of bilateral trade and payments agreements and barter deals to move its agricultural products abroad. During 1952 and 1953 it made or extended several such arrangements.

Of considerable importance is the agreement signed in December 1952 between Argentina and the United Kingdom for the exchange of Argentine meat for sterling area petroleum, coal, and tinplate. The quantity of meat involved is about 256,000 tons. A second particularly important agreement, signed March 23, 1953, is with Brazil and calls for a large volume of trade. Wheat and fruit will account for 92 percent of the total value of the products Argentina will export to Brazil—about $154 million.

Most of the Argentine agreements involve the exchange of Argentine agricultural products for industrial items. The agreements are so drawn up that, although lists of commodities and prices are mentioned, neither side is obliged to purchase the amounts named. In the case of Brazil the agreement is somewhat more binding, in order that Argentina may discharge obligations to Brazil for goods imported last year. The prices asked by Argentina in these barter arrangements differ materially from the free market price in countries outside Argentina, even in the countries making the purchases. The prices of commodities received by Argentina in exchange are also higher than world prices by more or less proportionate amounts.

Most of the grain exported by Argentina this year has been in barter deals. Commitments of wheat up to August 1 totaled about 2,732,000 long tons.

Treaties of "economic union" set up during 1953 with Chile and Paraguay (and under negotiation

with Bolivia) are intended to tie these countries in with the Argentine economy. Actually they provide a basis for more definite future agreements, but have relatively few specific obligations at present.

Trade with the United States

How much the United States sells to Argentina has for some years been closely related to how much it buys from that country, because Argentina attempts to restrict its purchases from countries with which it has an import trade balance.

In 1947, when our exports to Argentina totaled $679.9 million, Argentina ranked first as a market in Latin America for United States products. In 1952 it was in sixth place and in 1951, in fifth, probably because of a dollar shortage. Our future exports to Argentina will depend largely on the prosperity of its agricultural and livestock industry, the progress Argentina makes in industrialization and technical development of new products, and its import and exchange control policies.

The future of the Argentine market is not so much a concern of our farmers as of our manufacturers, for our exports consist primarily of machinery and vehicles, many of them agricultural. Shipments of agricultural products to Argentina —mostly of fruit, tobacco, hops, pine rosin, and turpentine—are generally less than 5 percent of total exports.

Most of our imports from Argentina, however, are products of agriculture that are used to supplement our own production—wool, hides, canned beef, quebracho extract, cheeses, and pears. Because the bulk of these shipments are raw materials, our imports from Argentina fluctuate widely, depending on the industrial activities in our country.

Part of the trade between the United States and Argentina moves under the Bilateral Trade Agreement signed on October 14, 1941. In this trade agreement the agricultural items on which the United States accords favorable treatment to Argentina are casein, yerba mate, tanning extracts, tallow, meat extract, preserved meats, grapes, plums and pears (seasonal), broom corn, grass seeds, certain types of wool, hides and skins, Italian type cheeses, sunflower-seed oil, canned tomatoes, and flaxseed. Flaxseed imports into the United States, however, are now subject to an import fee of 50 percent ad valorem under Section 22 of the Agricultural Adjustment Act, in addition to the trade agreement rate of 50 cents a bushel. The United States products on which Argentina made duty reductions are prunes; dried peaches, apples, pears, and cherries; fresh apples, pears, and grapes (seasonal); chewing gum; walnuts; raisins; raw tobacco; and cigarettes.

Outlook

With the new emphasis on agricultural expansion in Argentina, both total and per capita production of agricultural commodities are expected to increase. The index of per capita production of agricultural products (excluding livestock products), which had declined in 1951-52 to only 36 when using prewar production as a base, is estimated at about 69 for 1952-53. The index of per capita exports of agricultural items, which declined in 1952 to 28, is also moving upward; it is forecast at about 36 percent of prewar for 1953.

For the first half of 1953, exports of wool and hides were heavy and substantial quantities of cotton, quebracho extract, butter, casein, oilseed meals, and millfeed were also shipped. But grains moved slowly during the first 5 months of the year because of foreign resistance to the high prices asked for the grain by IAPI. In July, however, corn and wheat sales began picking up. Argentine wheat is now moving more rapidly because IAPI has shifted to a more flexible system and will consider any reasonable offer in line with prices abroad. The low rate of cattle marketings since January has cut beef exports and will reduce hide sales in the last half of 1953; wool stocks were already reduced by midyear, and the new clip will not become available for export until the fourth quarter. Therefore, the reversal in the downward trend in the volume of Argentina's agricultural exports for the year 1953 depends primarily on expected heavy sales of the large stocks of grain held at midyear.

Argentina has been able to show a substantial balance of current receipts from exports over payments for imports from January-June of this year. This compares with a deficit for all of last year of about $345 million. The favorable balance this year is largely the result of the strong control over imports in 1952 and the first half of 1953, and a rising volume of exports in 1953. However, increasing pressure is building up for badly needed raw materials, equipment, and replacement parts from abroad. It appears that with low stocks of wool and hides, small beef exports, and lower world grain prices, Argentina will have difficulty in maintaining as favorable an exchange balance during the rest of the year.

The bumper crops of wheat and small grains in 1952-53 have, however, increased income, and farmers have been generally satisfied with prevailing prices. There is now adequate rain, and in most areas pastures are good. The area planted to wheat and corn is expected to be larger than that of a year ago. Looking ahead a little further it is possible for Argentina to reach its production goals by 1957 if farm policy and weather are favorable. The attainment of these goals would serve to increase further the competition between Argentine and United States farmers in their search for world markets.

Spray Controls Coffee Blight in Nicaragua

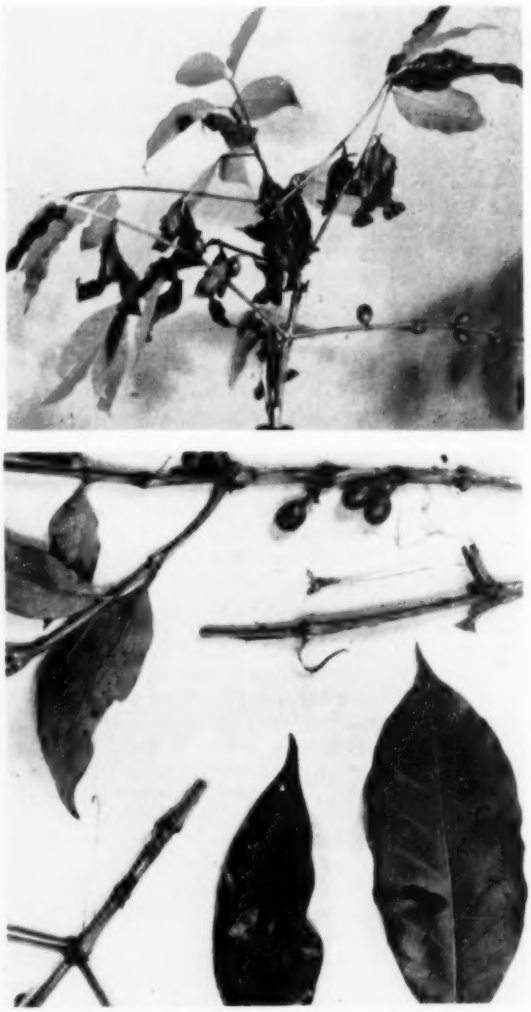
By WILLIAM P. DURUZ

When Nicaragua sees its coffee plantations suffering from a disease that shrivels and browns the leaves and mummifies the "cherries," it is seeing symptoms that not only threaten its whole economy but also affect the quality and price of coffee in the United States. For Nicaragua ranks among our top ten coffee suppliers, sending us nearly 40 million pounds a year.

The disease—called Koleroga disease, thread blight, and, by Nicaraguans, pellejillo—results in estimated coffee losses that range from 10 to 50 percent a year in some plantings. In 1952 it was thought to have destroyed as much as 70 percent in some areas, but even if the average loss for that year had been no more than 10 percent, it would have meant a loss of $2 million in exports, for exports that year were valued at $18 million.

When the destructive nature of the disease first became apparent, Nicaraguan growers tried to check it by the laborious method of hand picking the affected leaves and fruits from the trees and carrying them away to be destroyed. Now, however, as a result of studies at the government agricultural station—the Servicio Técnico Agrícola, cooperatively administered by Nicaragua and the United States under the technical cooperation program—growers have learned that the disease can be much more effectively and efficiently controlled by spraying.

Knowledge of the disease's life history and habits has been the basis for research on methods of control. The disease is caused by a fungus known as *Pellicularia koleroga*, sometimes referred to as *Corticum koleroga*, which, until conditions favor its growth, remains dormant as tough thread-like strands on the young shoots of the coffee tree. But, when the rainy season begins and the air is full of moisture, the fungus becomes active; and its new growth can be seen as whitish mycelium spreading along the undersurfaces of new leaves. The leaves soon turn brown and dangle from white threads until they drop. Many of the newest tree shoots also become infected and die. Even the green "cherries," or fruits, are attacked, fail to develop, and drop from the tree; the few mummies that remain are sometimes picked with the



Thread blight—or Koleroga disease or pellejillo—shrivels and browns the leaves of coffee trees and mummifies the fruit. Infected leaves dangle from threadlike filaments until they drop.

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good fruit, but their presence in the harvest results in an inferior product and they must therefore be eliminated before final processing.

It has now been demonstrated that, if new coffee leaves and shoots are protected by a copper-containing spray material, such as cuprocide, for example, the fungus cannot progress. Such fungicides are found to be effective when used at the rate of 2½ pounds to 50 gallons of water, with 1¼ quarts of adhesive oil added to keep the rain from washing the fungicide off the leaves. The big problem has been to cover all the leaf undersurfaces thoroughly. One application a year may not be enough to insure control, but two or three applications, made during the critical time, early in the rainy season, are ordinarily adequate.

Either knapsack sprayers or power sprayers are being used. Because of the lack of springs, streams, or wells in the coffee-growing regions, ingenious methods have had to be devised for bringing in water. In some places it has been hand carried from cisterns in jugs; in others it has been hauled by ox-drawn carts.

The manner in which coffee is grown makes spraying difficult. Trees are closely planted, many on steep hillsides or in canyons with stony or rocky terrain. At the very time when spraying is needed, the ground is usually wet and slippery, making hard going for a man on foot, especially if he is carrying a load on his back at the same time that he is trying to spray the undersides of leaves on interlocking, fruit-laden trees. Before spraying operations can begin, the trees must be pruned and, if a power sprayer is to be used, avenues must be cleared to permit moving the rig through the planting. These operations must be carried on to fit in with the growth of the cover crop, the flushes of growth in the coffee trees, and other circumstances. Procedure has not yet been standardized, and much remains to be determined before it can be.

Spraying with a copper-containing material is controlling thread blight in Nicaragua's coffee plantings. Spraying must be done so thoroughly as to reach the undersurfaces of the leaves.

Growers who have used gasoline-powered machines prefer them. Certainly the power sprayer has both appeal and purpose on the coffee fincas. It can be small enough to be moved through the closely planted trees and light enough to be maneuvered by the laborers. Under favorable conditions the low-slung estate- and trailer-type sprayers have proved practical. The power sprayer has several advantages over the knapsack sprayer: It gives higher pressure, permits the operator to work more rapidly, and does not hamper his movements around the trees. Long hose make it possible to spray trees that otherwise would be inaccessible. Handling of the hose is facilitated if the nozzleman has one or two assistants.

What proved to be an historic event in coffee spraying in Nicaragua took place in 1952, when a gasoline-driven machine with a 50-foot hose was used to spray more than 100 acres of trees. Some of the terrain was hilly and the ground was muddy. Water was brought in by oxcart. A block of approximately 40 trees was sprayed at each stop of the spray rig, and the sprayer was moved according to a system that avoided missing any of the trees. Two hosemen maneuvered the hose for the nozzleman, and all worked together to move the rig after each block had been sprayed.

The operation proved effective against the koleroga disease, and the interest it aroused has not ceased to grow. Moreover, the Ministry of Agriculture is working with growers at their fincas, actually demonstrating how the disease can be controlled by practical methods within the scope of their facilities and funds; and the advice is being well received. Many coffee growers are buying small power sprayers; many more are getting other spray equipment and materials together in readiness for the rainy season. Publicity and demonstrations have awakened many coffee growers to the fact that they can raise more and better coffee if they take practical action against disease.

Synthetic Rice Developed in Japan

By J. C. DODSON

A synthetic rice, composed of various combinations of wheat flour, potato starch, and natural rice in powdered form, is being produced in Japan on a small commercial scale. The synthetic rice is an "extender," to be mixed with real rice in cooking and not to be eaten alone. The small amount produced so far has been well received despite its rather high price. If the price can be reduced and if consumers accept the new product, some shift will probably take place in Japan's food imports; imports of wheat may increase and imports of barley and rice may decrease.

No special type of wheat flour is necessary for making the synthetic rice, but soft and medium soft grades are used unless the proportion of flour in the mixture is low. In that case, the hard grade is more desirable.

Producing a synthetic rice was first considered by Japanese technicians of the National Food Research Institute about 1940, when war was approaching and concern about food supplies was growing. Research was continued during the war but little progress was made, probably because synthetic rice would not actually add food to the nation's larder but would only serve to make nonrice foods more attractive and palatable. And in those days of food shortages, it was not necessary to cater to the epicurean desire for a product that looked and tasted like rice.

After the war, efforts to simulate rice were intensified. Attention centered on sweetpotatoes, which were in plentiful supply. Results were not successful, however, for, although sweetpotato starch was made into granules, they dissolved when cooked and had little resemblance to rice in taste. The experimenters then turned to other products, and by the fall of 1952 developed, from a combination of wheat flour, starch from white potatoes, powdered rice, and water, granules that, when cooked, were similar to rice in shape, consistency, and color. The wheat flour contributes a hard glutinous quality as well as protein, and the starch from potatoes adds bulk and whiteness.

Various combinations have produced a satisfactory product, and in all of them only 10 to 30 percent is powdered rice, which is produced from the low-cost broken grains in imported rice.

Government food officials plan soon to prescribe certain standards for the synthetic rice: water content not to exceed 14 percent; fiber and ash content not to exceed 0.4 and 0.7 percent, respectively; and a content of at least 335 calories per 100 grams. Within these specifications, manufacturers will be permitted to determine the composition of their product. Now, a common mixture is 70 percent wheat flour, 20 percent potato starch, and 10 percent powdered rice. Some mixtures have no starch but are a combination of 70 percent flour and 30 percent rice, because at present starch costs about 30 percent more than wheat flour. Food officials believe that a mixture of about 40 percent flour, 50 percent starch, and 10 percent rice will ultimately prevail, for too high a ratio of wheat (more than 40 percent) gives the synthetic product a slightly dark color and some odor.

Commercial interest in synthetic rice was keen when the improved type was developed late in 1952. By the fall of 1953, five plants were reportedly in operation, with a combined capacity of about 100 tons per day and actual production of about 50 tons. Other plants were installing equipment and productive capacity may reach 500 tons a day by the end of 1953. Expansion to 1,000 tons by late 1954 is anticipated but further expansion depends on market developments.

Unless synthetic rice appeals to the taste of the Japanese consumer, who has a critical palate for rice, the product will never have real importance regardless of other considerations. Early reports indicate that the product has been fairly well received, although those who have tried it may not be typical of consumers. Government nutritionists recently sponsored a taste test among a group of Tokyo residents, including members of a housewives' association. Of the 96 attendants polled, 55 said the product tasted was very good, 25 said it was fairly satisfactory, and 16 disliked it. As to appearance, 41 said they could not detect the presence of synthetic rice, 49 said they could

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TABLE 1.—*Chemical composition of two mixtures of synthetic rice and of natural rice*

Item	Water	Protein	Carbohydrate	Fat	Fiber	Ash	Calories
	Percent	*Percent*	*Percent*	*Percent*	*Percent*	*Percent*	*Number*
Natural rice	14.4	6.4	77.5	0.8	0.3	0.6	343
Synthetic "A" [1]	14.0	3.7	81.1	.3	.3	.6	344
Synthetic "B" [2]	14.0	7.0	77.4	.5	.4	.7	343

[1] 50 percent potato starch, 40 percent wheat flour, and 10 percent powdered rice.
[2] 20 percent potato starch, 70 percent wheat flour, and 10 percent powdered rice.

detect it on careful observation, and 6 said they could detect it immediately.

Perhaps a more significant indication of consumer reaction is that demand for the product appears to be strong despite its price and that manufacturers have shown confidence in the market by planning to expand production. One of Tokyo's large department stores, which sells synthetic rice in cellophane-wrapped packages labeled New Rice, sells about fifty 2-pound bags a day.

Next to consumer acceptance, the price of synthetic rice will determine how large a part it plays in Japan's food picture. Large-scale consumption of synthetic rice will come, if at all, largely from the low income groups. At present the price of synthetic rice—10 to 13 cents a pound—is too high to reach the mass market; rationed rice is 8.6 cents a pound and outside-ration rice 16 to 18 cents.

The quantity of rice rationed is considered inadequate by most families; they therefore supplement it with rice sold outside the ration if they have the money or stretch it with a product such as pressed barley, which sells for about 7 cents a pound.

In the hope that mass consumption of the new product will eventually permit a reduction in imports of high cost rice, the government is encouraging the development of the synthetic rice industry. In doing so, it is considering at least three lines of action: (1) subsidies on raw materials, especially starch; (2) assistance to manufacturers in obtaining commercial loans for plant equipment; and (3) inspection of the product.

The wheat that would have to be imported as an ingredient for the synthetic product is much less expensive than rice. As estimated in the government budget for 1953, rice costs about $213 a metric ton, milled, delivered in Japan, and wheat costs about $90. Even with allowance for the milling loss on wheat (hardly a loss since the byproducts are valuable), there would be substantial saving.

A decline in imports of rice would also reduce the food subsidy drain on the government. At present imported rice is sold to consumers at about 3 cents a pound ($65 a metric ton) less than the cost to the government. Subsidies on imported foods will total about $80 million this fiscal year, about $60 million of which is for rice.

Imports of rice could not be reduced for some time, however; the government must maintain a specified supply of rice for the consumer ration. This supply comes from domestic collections from farmers and from imports. Only as synthetic rice reduces the demand for rice sold outside the ration program, thus causing farmers to sell more rice to the government, would official stocks rise and a decrease in imports be feasible.

Part of the savings resulting from smaller rice imports would be offset if the government were to subsidize the manufacture of synthetic rice. The purpose of the subsidy would be to lower the price of the synthetic product to the level of rationed rice, at which price it is believed the consumer demand would be substantial. The subsidy as proposed would apply to the potato starch. It is estimated that the price of synthetic rice could be lowered to that of the rationed commodity if the price of starch were reduced by about 1.7 cents a pound. The subsidy would benefit domestic potato growers and the use of potato starch in synthetic rice would make for more efficient disposition of the potato crop.

If the Japanese can afford to buy the new product and if they wish to, it could be a significant factor in Japan's future food program. Its potentialities should not be overemphasized, however, for it has not as yet proved that it can break the traditional eating habits of the Japanese, who demand rice as a staple food and who prefer a high quality rice. However camouflaged, the synthetic product is not rice and it does not add to the country's food supply; it only alters the form of certain foodstuffs already available.

There is a limit to the amount of rice that is obtainable now and that will be obtainable in the foreseeable future. Synthetic rice could stretch the food supply for the country's rapidly increasing population and thus contribute to economic and social stability.

Forest Management in Sweden

By RALPH S. YOHE

It was fall as I drove through southern Sweden. At times the road was half lost in thick forests of dark-green spruce and pine. Now and then it swept round a blue lake edged with clumps of birch and maple.

Occasionally the white-painted tower of a centuries-old church loomed up in the distance above the autumn-colored trees. The road cut through rich, rolling farm land dotted with neatly stacked shocks of wheat or carpeted with golden stubble left in the wake of combines.

Large red farmsteads topped many of the high knolls along the way. Ancient moss-covered stone fences bordered the winding black-top road and kept the herds of black-and-white cattle in their lush roadside pastures of timothy and clover. After a few miles, the road again turned into a forest of thick, straight spruce and pine.

In the rich agricultural area of southern Sweden, farmers are as much interested in good forestry practices as they are in good farming practices, for they own most of the vast forests of the area and have long depended on them to provide a steady source of income.

Swedish farmers have not always emphasized forest conservation. Fifty years ago the forests in southern Sweden were badly managed. The sawmills left slashed-over timber sites in their wake as they cut the forest faster than it could possibly grow. What forests were left were more often than not scattered stands and full of weed trees. Awakening to their loss, farmers began to be interested in forest management and today the growing stock of trees on the farms of southern Sweden has increased greatly. Some farms have 40 to 50 percent more standing timber than they had only 25 years ago. The new, well managed forests have a timber supply so large that new pulp factories and lumber mills have been started in the south.

It is not only the farmers of Sweden who have a stake in good forestry management. The country as a whole benefits, for much of the land, especially that in the far north, is suited only for growing trees. This potential wasteland gives employment to more than a million people—in the forests, the sawmills, and forest products plants—and it produces enough wood products to furnish the country all it needs and to make up 50 to 60 percent of the total value of all exports.

Behind all this is a program of forest education based on efficient forestry extension services.

Swedish farms as a rule are passed along from father to son down through the years. So it is only natural that education in proper forest management is especially directed at farm youth. This education gives the young people general information on the importance of forest land, and teaches them many practical things they can do themselves—for instance, how to mark their own trees.

Four-H clubs and other youth organizations have organized forestry clubs. Even the grade school pupils in many areas may take 6- to 12-week

The well managed farm forests of Sweden are an important source of farm income.

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Timber is an important crop on the farms of southern Swedea, where farmers consider good forestry practices as important as good farming practices.

courses in practical forest management. Agricultural and farm schools include forestry as a major course, and correspondence courses are available for farmers and farm youth.

Twenty-five county forestry boards serve the country. These boards are primarily concerned with extension work. They organize short courses for local farmers and farm youth. The foresters conduct night meetings among the farmers and help them mark the trees just as our county agents and farm advisers help our farmers with typical farm problems.

Practically every community has its own organization of forest owners. Frequently the groups hire their own forester to help mark their trees and plan proper forest programs.

All this culminated in the forest conservation law passed by the Swedish parliament in 1949. It is the capsheaf of various laws passed during the past 50 years to conserve Swedish forests. Basically, the law requires that forest land be managed according to the capacity of the soil to produce forest and in such a way that it provides a constant yield of wood and timber and, so far as possible, insures a satisfactory economic profit.

In practice this means that young stands may not be completely cut away unless the land is better suited to farming than to forests. When forests on other land are cut, they must be allowed to grow up again. When the cut-over area is small, the farmer must replant it.

But since most farmers are anxious to do as good a job as possible with the forests, there have been few violations of the law and only in exceptional cases has the government had to step in to force proper forest management. Farmers look on the forest as a steady crop.

The great success of Sweden's farm forests, like that in the other Scandinavian countries, has been well grounded on education and extension work. With more than half of the country in forests, the Swedish farmers, and the Swedish people in general, know that much of their income depends on their well managed forest land.

Cuban Yellow Corn in Bolivia

By FRANK J. SHIDELER

The little boy who was helping guard the cornfield from marauding flocks of birds pointed beyond his father's two-room hut and said "there is much bigger corn in that field over there—and it's yellow."

He was talking to staff members of the jointly operated agricultural station, Servicio Agricola Interamericano, who were looking for some representative ears of the native corn grown in the Santa Cruz area of eastern Bolivia. But this 7-year-old farm laborer's son, like hundreds of other people in the area, was prouder of the newly introduced yellow corn.

The Bolivian version of the Cuban Yellow story has much in common with the introduction and use of this corn in other countries where corn is the principal food. But its impact on the people near Santa Cruz is one of the biggest aids so far to the Servicio Agricola Interamericano, the agricultural part of our country's technical assistance undertaking in Bolivia.

"The introduction of the corn variety Cuban Yellow alone is enough to justify the creation of the Servicio Agricola Interamericano," says Señor Roger Mercado, a farmer near Santa Cruz. He believes that this corn with its much greater yield will in a few years replace all local varieties.

Personnel of the SAI Extension Division in Santa Cruz are enthusiastic about the success of Cuban Yellow; they all agree that it is the most spectacular accomplishment of the research-extension team.

One can readily see why "Cubano Amarillo" is becoming almost a household word and why the heavy demand for seed could not be met last planting season in the area near Santa Cruz. In the first place, SAI technicians say that Cuban Yellow yields up to 75 bushels to the acre. This compares with an estimated 32 bushels for the native corns. Too, the corn's yellow color means more food value, its earliness gives it a head start over weeds, and its large, hard kernels make it easier to store. Weevil damage to native corn is extensive and costly, and one farmer using Cuban Yellow says it suffers less weevil damage. But its principal attraction is its high yields.

"The Santa Cruz area in the past has not been producing enough corn for human consumption," says an extension specialist. "This means corn is high priced. With more production, there will be sufficient corn not only for food but also for feed and for 'export' to Cochabamba, where the corn prices generally are even higher than in Santa Cruz. If enough of this corn gets to the Cochabamba market to bring prices down, some farmers will turn from growing corn to growing much-needed wheat."

Cuban Yellow corn, recently introduced into Bolivia, may soon replace local varieties. Its yield and food value are higher, it is earlier, and it stores better.

Mr. Shideler is Extension Information Specialist, American Embassy, La Paz, Bolivia.

One of the most spectacular phases of the Bolivian Cuban Yellow story is the rapid multiplication of seed. That phase began when Dr. Hans Platenius, Director of the SAI Experiment Station at General Saavedra, brought about a pound of the corn from Peru in July 1951. He began multiplying this pound of corn at the experiment station. Neighboring farmers and the extension division helped him. Now, two years later, the amount of seed available is measured in tons.

Last season 8½ tons of Cuban Yellow seed were distributed to some 200 cooperating farmers in the Santa Cruz area, but it was not enough to satisfy the demand. The harvest is estimated at 3,000 tons—only slightly below the total corn harvest in the area in 1950, although less than a third of all the ground planted to corn is in Cuban Yellow.

The research-extension team of SAI in the Santa Cruz area is not stopping with its present success with Cuban Yellow. Dr. Platenius says that research work must continue because already an insect is showing preference for Cuban Yellow over the native corns. Then, the station is also trying to select for higher uniformity, which at present is not satisfactory.

Officials at the station point out that now that farmers know more about the work of SAI and have more confidence in it, the introduction of other new crops and practices will be easier.

Reading about... Foreign Agriculture

Animal Fats: World Production and Trade, by William C. Bowser, Jr., Foreign Agriculture Report No. 76, 25 pp., mimeo., published by FAS.

Since the war the world has been turning out increasing quantities of animal fats. In the past 3 years the United States share in output of lard and tallow and grease alone has been about two-fifths and its share in world markets, roughly three-fourths. Most of the Report is given to these commodities; butter, a dairy product but also the third commodity making up "animal fats," is discussed briefly.

A Comprehensive Agricultural Program for Puerto Rico, by Nathan Koenig. Published by the U. S. Department of Agriculture in cooperation with the Commonwealth of Puerto Rico, 300 pages, $1.75 from Superintendent of Documents, Government Printing Office, Washington, D. C.

This report on the agriculture of Puerto Rico is in fact a blueprint for progress, with recommendations and an approach that could be used by underdeveloped areas in both hemispheres. For the problems of people and their land that the program has been designed to overcome are the same as those of other mountainous primarily agricultural countries in many parts of the world: depleted resources, undernourished people, and under-employed people and land.

Basis of the report is the information and recommendations developed by 14 "task forces" of technicians in a 2-year study that preceded the work of putting the program together.

Mr. Koenig has handled an enormous volume of diverse and complicated data with a sure touch. His organization is good; his style throughout, easy and straightforward. Many photographs, charts, maps, and tables enliven the pages and add greatly to the usefulness of this document.

Thirteen chapters headings with their numerous sub-heads give the reader, almost at a glance, a complete outline of the publication. With the exception of the first, which is introductory, each chapter is an entity. The problem is stated and discussed and the road toward a solution indicated. Soil Erosion, Use and Control of Water, Forests, Grasslands, Reclamation are some of the chapters devoted to the vital soils and land use problems. Equally important are the chapters on credit and finance, marketing, and policy. Last, and critically important to the success of the entire program, is the final chapter, Pulling Together for a Stronger Agriculture. Here, the author emphasizes again and again the need for cooperation of all groups at all levels. In his words, ". . . improvement and development of the agriculture of Puerto Rico . . . will take much time and effort and will require all of the courage and positive action that the people of Puerto Rico are capable of exerting. . . . The opportunity to reach a common objective so vital to the permanent economic strength of the island is a challenge to everyone who has a stake in Puerto Rico's future."

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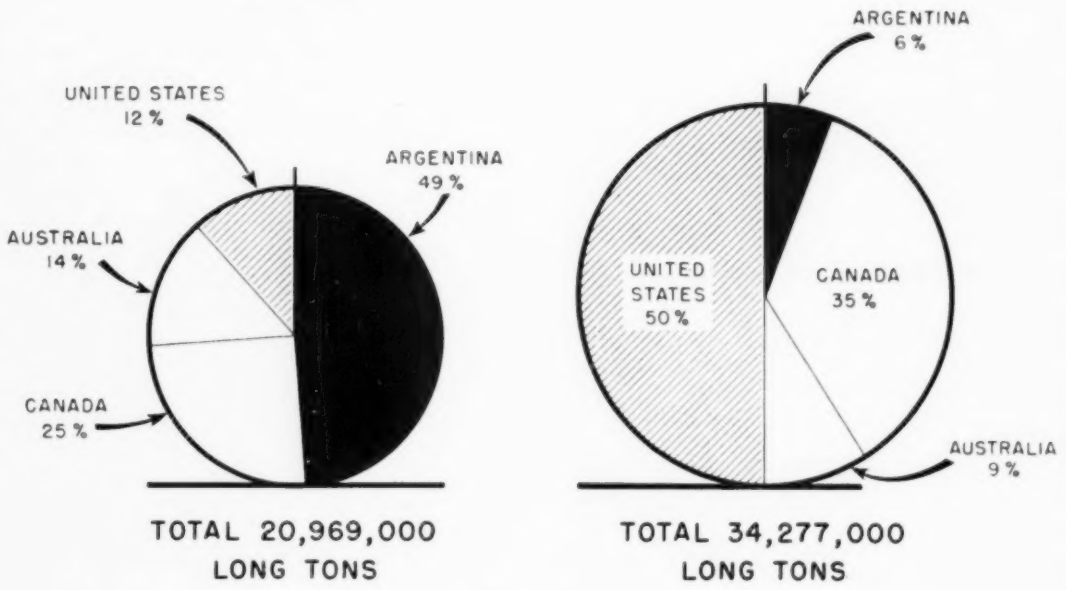

* JULY – JUNE YEAR (CORRESPONDING TO 12 MONTH PERIOD OF GRAIN MARKETING YEAR OF THE UNITED STATES.)

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